



# VOLVO

## OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>ABNORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Area  
**[SWA560078-10]**  
 Machine Id  
**VOLVO L180H 5412**  
 Component  
**Hydraulic System**  
 Fluid  
**VOLVO SUPER HYDRAULIC OIL 46 (--- GAL)**

### RECOMMENDATION

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>VCP430313</b>	VCP442820	VCP396101
Sample Date		Client Info		<b>16 May 2024</b>	07 Feb 2024	01 Feb 2023
Machine Age	hrs	Client Info		<b>9182</b>	7046	6657
Oil Age	hrs	Client Info		<b>2000</b>	0	6657
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Changed</b>	N/A	Changed
Filter Changed		Client Info		<b>Not Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>5</b>	9	9
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	1	4
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	<1
Lead	ppm	ASTM D5185m	>20	<b>0</b>	2	<1
Copper	ppm	ASTM D5185m	>20	<b>2</b>	4	5
Tin	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

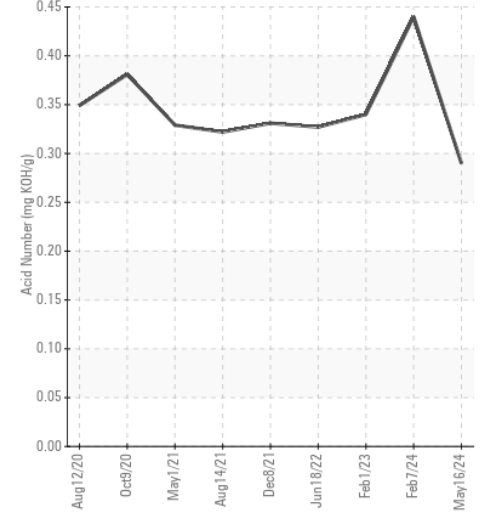
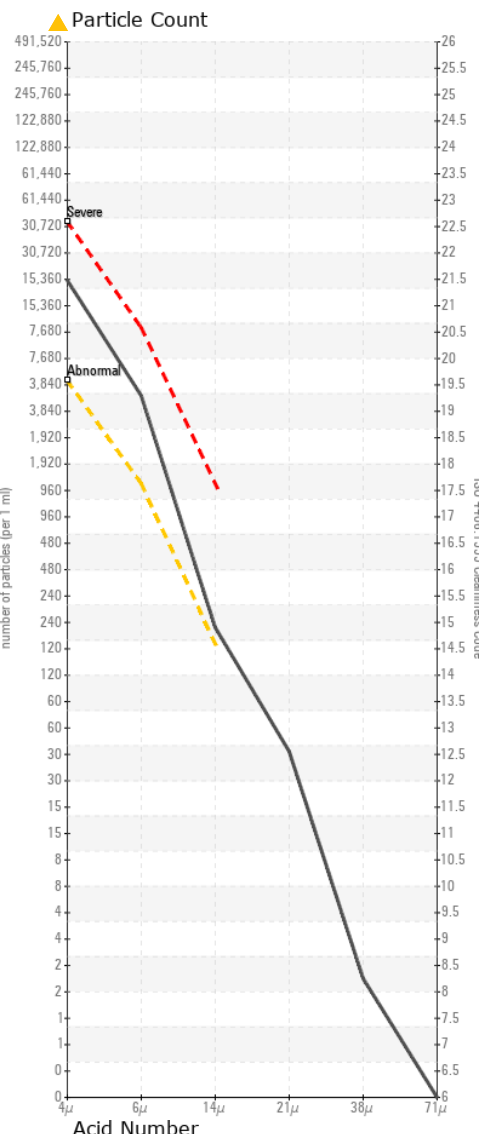
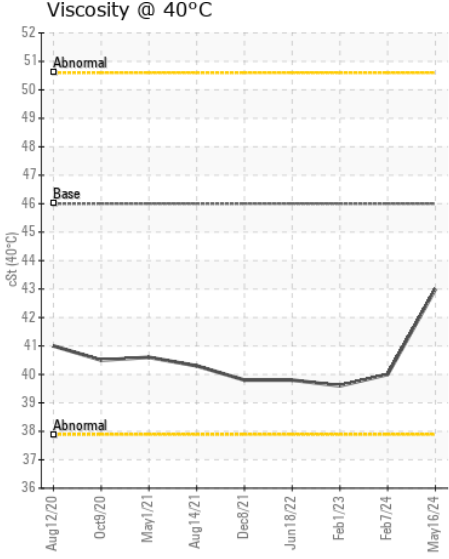
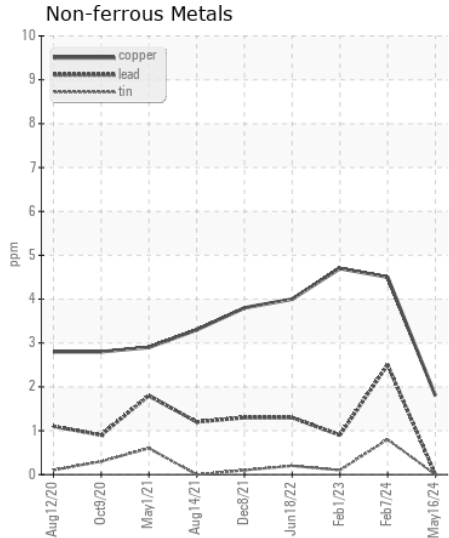
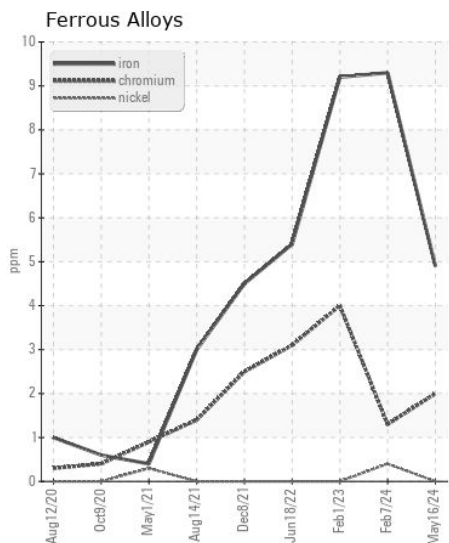
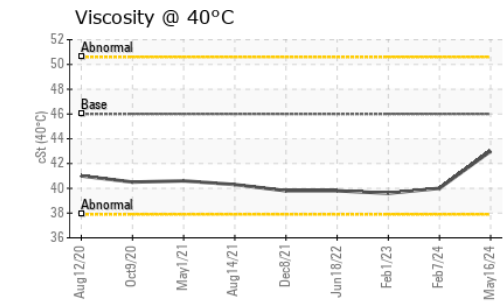
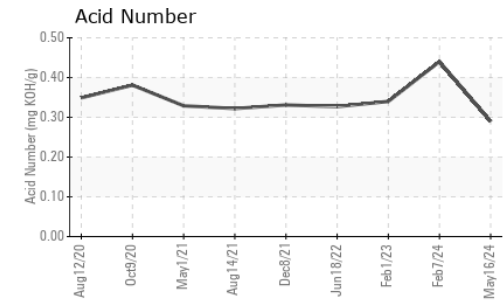
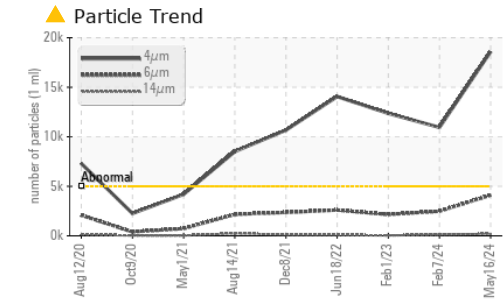
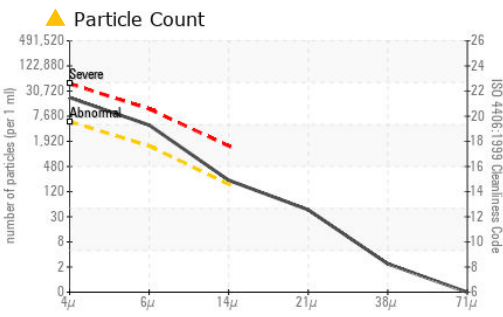
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>5</b>	4	4
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>5000	<b>▲ 18590</b>	▲ 10944	▲ 12359
Particles >6µm		ASTM D7647	>1300	<b>▲ 4101</b>	● 2482	● 2153
Particles >14µm		ASTM D7647	>160	<b>● 198</b>	114	37
Particles >21µm		ASTM D7647	>40	<b>39</b>	19	7
Particles >38µm		ASTM D7647	>10	<b>2</b>	0	0
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>▲ 21/19/15</b>	▲ 21/18/14	▲ 21/18/12
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Sodium	ppm	ASTM D5185m		<b>2</b>	0	3
Boron	ppm	ASTM D5185m	14	<b>0</b>	3	0
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	13	0
Molybdenum	ppm	ASTM D5185m	0.0	<b>0</b>	1	0
Manganese	ppm	ASTM D5185m	0.0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	2.6	<b>3</b>	5	<1
Calcium	ppm	ASTM D5185m	49	<b>67</b>	315	39
Phosphorus	ppm	ASTM D5185m	354	<b>344</b>	406	294
Zinc	ppm	ASTM D5185m	419	<b>424</b>	485	359
Sulfur	ppm	ASTM D5185m	3719	<b>1751</b>	1313	663
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.29</b>	0.44	0.34
Visc @ 40°C	cSt	ASTM D445	46	<b>43.0</b>	40.0	39.6



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VCP430313 **Received** : 24 May 2024  
**Lab Number** : 06190983 **Tested** : 29 May 2024  
**Unique Number** : 11047735 **Diagnosed** : 29 May 2024 - Wes Davis  
**Test Package** : MOB 2

**CALLANAN**  
 RT 32 677 FLATBUSH RD  
 EAST KINGSTON, NY  
 US 12401  
 Contact:

To discuss this sample report, contact Customer Service at 1-800-237-1369.  
 \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.  
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)